

7_3 LATERAL DITCHES IN ROADWAY DESIGNER

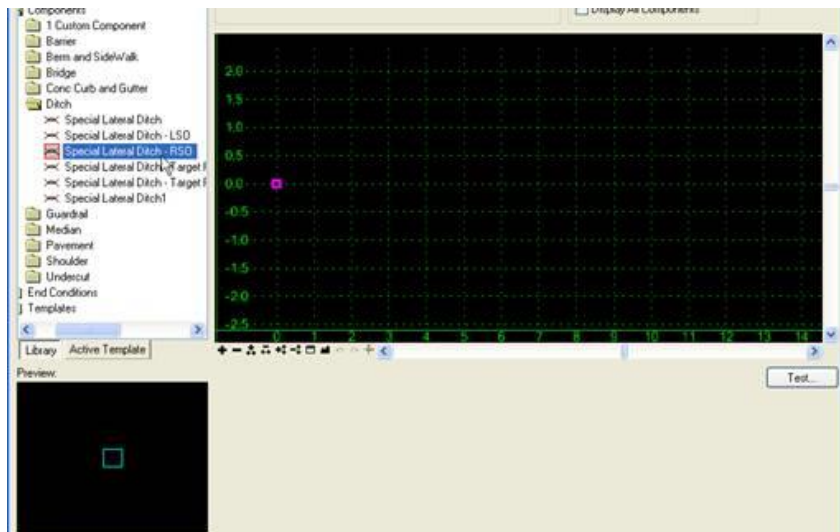
Question:

The special lateral ditch components are not displaying properly. Can you explain how lateral ditches are designed work?

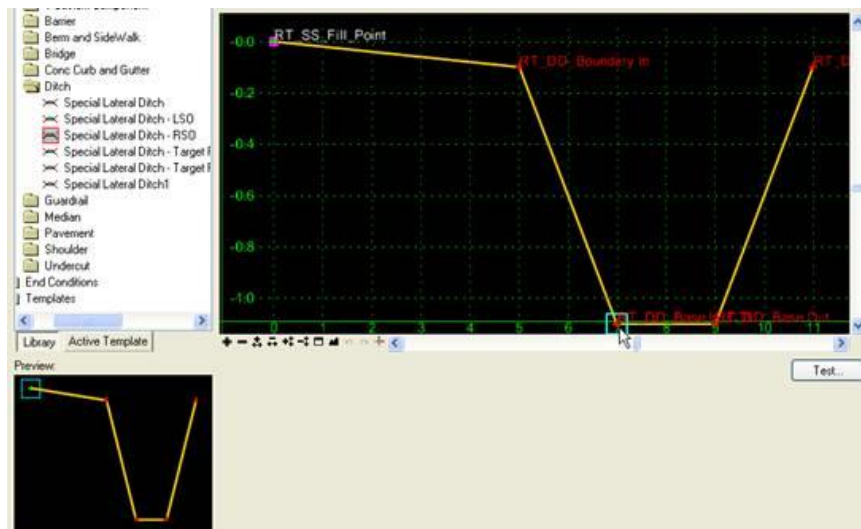
Answer:

You can practice on placing special lateral ditches by going through the online exercises, Chapter 8 - Lateral and Roadway Ditches

Non-feature targeting ditch components are turned off by default by a display rule.



When the ditch inside base point is moved below the zero elevation point, the whole ditch component is then displayed (or turned on).



When to use parametric constraints or point controls to move this particular inside ditch base point depends if a ditch grade is available from Hydro:

1. If Hydro has provided the ditch grades, then use Point Controls to move these ditch inside base points to the ditch grade. Note the "Vertical" only mode.

Point Controls

Corridor: L

Control Description:

Point: LT_DD_Base In_CT

Mode: ☐ Horizontal ☒ Vertical ☐ Both

Control Type: Alignment

Horizontal Alignment: L

Vertical Alignment: LT_DT1

Station Limits: Start: 26+00.00 Stop: 27+00.00

Horizontal Offsets: Start: 0.0000 Stop: 0.0000

Vertical Offsets: Start: 0.0000 Stop: 0.0000

Priority: 1

Horizontal and Vertical Controls:

E...	Pri...	Name	Start Station	Stop Station	Mode	Type	Control
X	1	LT_DD_Base In_CTL	26+00.00	27+00.00	Vertical	Alignment	L:LT_DT1
X	1	LT_DD_Base In_CTL1	26+00.00	27+00.00	Vertical	Alignment	L:LT_DT1

Buttons: Add, Close, Change, Help, Delete

2. If ditch grades are not available, Point Controls in "Elevation and Grade" mode can be used.

Point Controls

Corridor: L

Control Description:

Point: LT_DD_Base In_CT

Mode: ☐ Horizontal ☒ Vertical ☐ Both

Control Type: Elevation and Grade

Elevation: 866.5000

Grade: -2.50%

Station Limits: Start: 26+00.00 Stop: 27+00.00

Horizontal Offsets: Start: 0.0000 Stop: 0.0000

Buttons: Add, Close, Change, Help, Delete

Parametric Constraints can also be used for a typical 1' minimum depth ditch.

Parametric Constraints

Corridor: L

Constraint Label: DD_LT Ditch Depth

Start Value: -1.0000

Stop Value: -1.0000

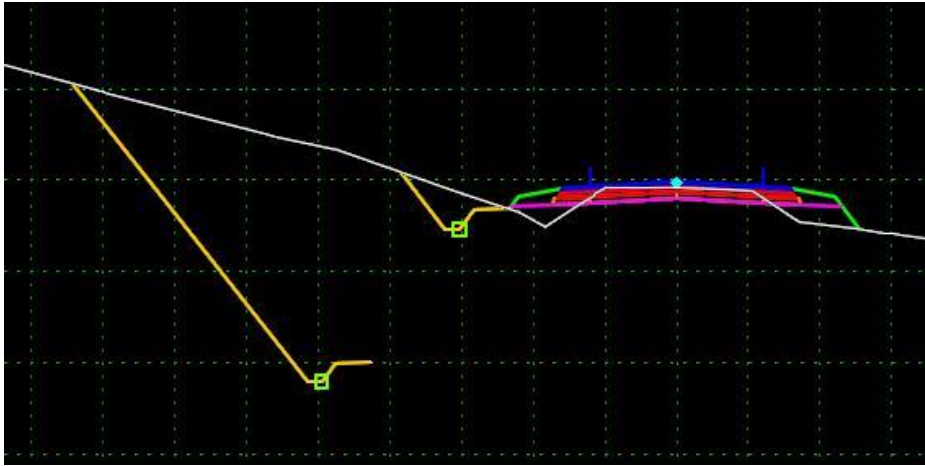
Station Limits: Start: 24+15.00 Stop: 25+10.00

Override Values:

Enabled	Name	Start Value	Stop Value	Start Station	Stop Station
X	DD_LT Ditch Depth	-1.0000	-1.0000	24+15.00	25+10.00

Buttons: Add, Close, Change, Help, Export..., Import..., Delete

Lastly, for a full standard road template, multiple end conditions may exist from multiple origin points.



To display just the ditch component to a particular end condition branch (and turn off the other ditch components), a “parent-to-child” component rule must be applied for each end condition segment (fill slope). This type of modification is done at the template level.

